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EXAMINER

RAMPURIA, SHARAD K

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 06/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/750,592

Applicant(s)

DHARIA ET AL.

Examiner

Sharad Rampuria

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_                      6) ☐ Other: \_\_\_\_

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-3, 8-14, 25-27, 30-38, 42-44, 46, 49-52, are rejected under 35 U.S.C. 102 (e) as being anticipated by McLaughlin et al.

1. Regarding claim 1, McLaughlin disclosed A communication system for communication using wireless signals including down-link signals to and up-link signals from mobile stations, comprising, a plurality of transceiver stations having broadcast channels and dedicated channels carried by said wireless signals, (Abstract)

measurement means for forming measurements of said wireless signals, (Col.10; 63 - Col.11; 3)

zone manager (20; Fig.1) means including, processor means for processing said measurements forming processor information to determine preferred ones of said transceiver stations for particular dedicated channels for a particular mobile station, (Col.11; 4-15)

control (18; Fig.1) means for dynamically selecting said preferred ones of said transceiver stations to provide said particular dedicated channels for said particular mobile station separately from one of said transceiver stations providing particular broadcast channels for said particular mobile station. (Col.7; 57 - Col.8; 11)

2. Regarding claim 2, McLaughlin disclosed The communication system of claim 1 wherein said measurement means measures said up-link signals from said particular mobile station to form said measurements. (Col.9; 29-56)

3. Regarding claim 3, McLaughlin disclosed The communication system of claim 2 wherein, said control means is responsive to said processor information for changing said dedicated channels as frequently as a signal change time determined by a frequency of said up-link signals. (Col.11; 4-15)

8. Regarding claim 8, McLaughlin disclosed The communication system of claim 1 wherein said zone manager means is formed of a plurality of zone managers, one for each of said transceiver stations. (Col.12; 43-51)

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9. Regarding claim 9, McLaughlin disclosed The communication system of claim 8 wherein said zone managers are co-located with said transceiver stations at macrodiverse locations. (Col.12; 53-59)

10. Regarding claim 10, McLaughlin disclosed he communication system of claim 9 wherein said zone managers are interconnected with each other forming a network. (Col.9; 29-56)

11. Regarding claim 11, McLaughlin disclosed The communication system of claim 8 wherein two or more of said zone managers are co-located at a common location. (Col.9; 29-56)

13. Regarding claim 13, McLaughlin disclosed The communication system of claim 8 wherein said plurality of zone managers include a host zone manager and one or more assistant zone managers, said host zone manager operative to communicate over said particular broadcast channels with said particular mobile station while said particular dedicated channels for said particular mobile station are dynamically switched among said one or more assistant zone managers and said host zone manager. (Col.12; 34-59)

14. Regarding claim 14, McLaughlin disclosed The communication system of claim 13 wherein said measurement means includes a plurality of measurement units, one for each of said zone managers, where each measurement unit measures up-link traffic signals from said particular mobile station to form ones of said measurements as unit measurements. (Col.12; 34-59)

25. Regarding claim 25, McLaughlin disclosed The communication system of claim 1 wherein said manager means is formed of a plurality of zone managers, one for each of said transceiver stations, each particular one of said zone managers having, control means including, a resource manager for managing available resources in said communication system, an airlink controller for controlling the radio channels in said communication system, interface means for providing interfaces for said particular one of said zone managers. (Col.12; 34-59)

26. Regarding claim 26, McLaughlin disclosed The communication system of claim 25 wherein said interface means includes a zone\_manager-to-zone\_manager interface manager for controlling zone manager links among said zone managers. (Col.12; 34-59)

27. Regarding claim 27, McLaughlin disclosed The communication system of claim 25 wherein said interface means includes a transceiver interface for controlling a transceiver link from said particular one of said zone managers to a corresponding transceiver station. (Col.12; 34-59)

30. Regarding claim 30, McLaughlin disclosed The communication system of claim 25 wherein one or more of said zone managers is integrated into one or more of said transceiver stations. (Col.9; 29-56)

31. Regarding claim 31, McLaughlin disclosed The communication system of claim 1 wherein said control means includes broadcaster commands for controlling the down-link signals to each of selected ones of said mobile stations and collector commands for controlling the plurality of

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macro-diverse collectors for changing the up-link signals for each of other selected ones of said mobile stations. (Col.9; 29-56)

32. Regarding claim 32, McLaughlin disclosed The communication system of claim 1 wherein said wireless signals employ multiple access protocols. (Col.9; 15-21)

33. Regarding claim 33, McLaughlin disclosed The communication system of claim 32 wherein said wireless signals employ TDMA protocols. (Col.9; 15-21)

34. Regarding claim 34, McLaughlin disclosed The communication system of claim 32 wherein said wireless signals employ CDMA protocols. (Col.9; 15-21)

35. Regarding claim 35, McLaughlin disclosed The communication system of claim 32 wherein said wireless signals employ SDMA protocols using smart antennas. (Col.9; 15-21)

36. Regarding claim 36, McLaughlin disclosed The communication system of claim 32 wherein said wireless signals employ FDMA protocols. (Col.9; 15-21)

37. Regarding claim 37, McLaughlin disclosed The communication system of claim 1 wherein said transceiver stations communicate over a region containing one or more zones and said measurement means includes measurements from one or more collectors in said transceiver stations. (Col.12; 34-59)

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38. Regarding claim 38, McLaughlin disclosed The communication system of claim 37 wherein said measurements from one or more collectors include radio link conditions between a mobile station and said one or more collectors. (Col.12; 34-59)

42. Regarding claim 42, McLaughlin disclosed The communication system of claim 37 wherein said measurements from one or more collectors are processed in the zone manager means related to said one or more base transceiver stations. (Col.9; 29-56)

43. Regarding claim 43, McLaughlin disclosed The communication system of claim 1 wherein said zone manager means includes a host zone manager and one or more assistant zone managers and said host zone manager processes said measurements from the one or more assistant zone manager means to provide processed measurements. (Col.12; 34-59)

44. Regarding claim 44, McLaughlin disclosed The communication system of claim 43 wherein said host zone manager derives processor information from said processed measurements.  
(Col.10; 19-43)

46. Regarding claim 46, McLaughlin disclosed The communication system of claim 44 wherein said processor information includes timing and synchronization information. (Col.11; 4-15)

49. Regarding claim 49, McLaughlin disclosed The communication system of claim 1 wherein said transceiver stations include broadcaster controllers for controlling broadcaster transmitters

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and said broadcaster controller selects one or more broadcaster transmitters for forward communications with mobile stations based on said processor information. (Col.9; 29-56)

50. Regarding claim 50, McLaughlin disclosed In a communication system for communication using wireless signals including down-link signals to and up-link signals from mobile stations, the method comprising, transmitting, from a plurality of transceiver stations, broadcast channels and dedicated channels over said wireless signals, (Abstract)

forming measurements (Col.10; 63 - Col.11; 3) of said wireless signals with measurement means, with zone manager (20; Fig.1) means, processing, with processor means, said measurements forming processor information to determine preferred ones of said transceiver stations for particular dedicated channels for a particular mobile station, (Col.11; 4-15)

dynamically selecting, with control means, said preferred ones of said transceiver stations to provide said particular dedicated channels for said particular mobile station separately from one of said transceiver stations providing particular broadcast channels for said particular mobile station. (Col.7; 57 - Col.8; 11)

51. Regarding claim 51, McLaughlin disclosed In the communication system of claim 50, measuring said up-link signals from said particular mobile station to form said measurements. (Col.9; 29-56)

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52. Regarding claim 52, McLaughlin disclosed In the communication system of claim 50, changing said dedicated channels as frequently as a signal change time determined by a frequency of said up-link signals. (Col.11; 4-15)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-7, 18-19, & 53-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over McLaughlin et al. in view of Chavez et al.

6. Regarding claim 6, McLaughlin disclosed all the particulars of the claim except change time is less than 1 second. However, Chavez teaches in an analogous art, that The communication system of claim 3 wherein said change time is less than 1 second. (Col.5; 12-16) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include change time is less than 1 second in order to provide improvement in cell boundary control with reduced time consumption.

7. Regarding claim 7, McLaughlin disclosed all the particulars of the claim except measurement signals occurring at a measurement signal rate of  $1/T$ . However, Chavez teaches in an analogous art, that The communication system of claim 1 wherein said up-link signals from said particular mobile station are measurement signals occurring at a measurement signal rate of  $1/T$  and wherein said processor operates, to generate said measurements at a rate of  $1/T$ , to integrate a plurality of said measurements over an integration length to form integrated measurement reports, to form said integrated measurement reports using said processor information. (Col.8; 50 – Col.9; 25) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include measurement signals occurring at a measurement signal rate of  $1/T$  in order to reduce interference and time consumption.

18. Regarding claim 18, McLaughlin disclosed all the particulars of the claim except change time is a multiple of said up-link signal frame rate. However, Chavez teaches in an analogous art, that The communication system of claim 17 wherein said change time is a multiple of said up-link signal frame rate. (Col.5; 61 - Col.6; 4) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include change time is a multiple of said up-link signal frame rate in order to provide improvement in cell boundary control with reduced time consumption.

19. Regarding claim 19, McLaughlin disclosed all the particulars of the claim except measurement signals occurring at a measurement signal rate of  $1/T$ . However, Chavez teaches in an analogous art, that The communication system of claim 15, wherein said up-link signals from

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said particular mobile station are measurement signals occurring at a measurement signal rate of  $1/T$ , wherein said measurement unit in each zone manager operates to generate said unit measurements at a rate of  $1/T$ , wherein said processor means in each zone manager operates, respectively, to generate integrated unit measurement reports by integrating a plurality of said unit measurements, respectively, over an integration length. (Col.8; 50 – Col.9; 25) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include measurement signals occurring at a measurement signal rate of  $1/T$  in order to reduce interference and time consumption.

53. Regarding claim 53, McLaughlin disclosed all the particulars of the claim except change time is approximately an up-link signal frame rate of said up-link signals. However, Chavez teaches in an analogous art, that The communication system of claim 52 wherein said change time is approximately an up-link signal frame rate of said up-link signals. (Col.5; 27-46) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include change time is approximately an up-link signal frame rate of said up-link signals in order to provide improvement in cell boundary control with reduced time consumption.

54. Regarding claim 54, McLaughlin disclosed all the particulars of the claim except change time is a multiple of said up-link signal frame rate. However, Chavez teaches in an analogous art, that The communication system of claim 53 wherein said change time is a multiple of said up-link signal frame rate. (Col.5; 61 - Col.6; 4) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include change time is a multiple of said up-

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link signal frame rate in order to provide improvement in cell boundary control with reduced time consumption.

55. Regarding claim 55, McLaughlin disclosed all the particulars of the claim except change time is less than 1 second. However, Chavez teaches in an analogous art, that In the communication system of claim 52 wherein said change time is less than 1 second. (Col.5; 12-16) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include change time is less than 1 second in order to provide improvement in cell boundary control with reduced time consumption.

56. Regarding claim 56, McLaughlin disclosed all the particulars of the claim except measurement signals occurring at a measurement signal rate of  $1/T$ . However, Chavez teaches in an analogous art, that The communication system of claim 50 wherein said up-link signals from said particular mobile station are measurement signals occurring at a measurement signal rate of  $1/T$  and wherein said processing operates, to generate said measurements at a rate of  $1/T$ , to integrating a plurality of said measurements over an integration length to form integrated measurement reports, to form said integrated measurement reports using said processor information. (Col.8; 50 – Col.9; 25) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include measurement signals occurring at a measurement signal rate of  $1/T$  in order to reduce interference and time consumption.

Claims 12, 28-29, & 39-40, are rejected under 35 U.S.C. 103(a) as being unpatentable over McLaughlin et al. in view of Kao.

12. Regarding claim 12, McLaughlin disclosed all the particulars of the claim except a controller link having an interface between a base station controller and one of said transceiver stations and one of said zone managers. However, Kao teaches in an analogous art, that The communication system of claim 11 wherein said common location is a base station controller in a cellular system. (Col.6; 15-23) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a controller link having an interface between a base station controller and one of said transceiver stations and one of said zone managers in order to provide a controller to monitor one or more base stations.

28. Regarding claim 28, McLaughlin disclosed all the particulars of the claim except a controller link having an interface between a base station controller and one of said transceiver stations and one of said zone managers. However, Kao teaches in an analogous art, that The communication system of claim 25 wherein said communication system includes a controller link having an interface between a base station controller and one of said transceiver stations and one of said zone managers, corresponding to said one of said transceiver stations, is in said controller link. (Col.6; 15-23) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include a controller link having an interface between a base station controller and one of said transceiver stations and one of said zone managers in order to provide a controller to monitor one or more base stations.

29. Regarding claim 29, McLaughlin disclosed all the particulars of the claim except controller link is an Abis link. However, Kao teaches in an analogous art, that The communication system of claim 28 wherein said controller link is an Abis link. (Col.6; 48-56) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include controller link is an Abis link in order to provide an improved wireless communication system which overcome the limitations of conventional cellular system.

39. Regarding claim 39, McLaughlin disclosed all the particulars of the claim except radio link conditions include path loss. However, Kao teaches in an analogous art, that The communication system of claim 38 wherein said radio link conditions include path loss. (Col.10; 38-46) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include radio link conditions include path loss in order to provide an improved wireless communication system which overcome the limitations of conventional cellular system.

40. Regarding claim 29, McLaughlin disclosed all the particulars of the claim except radio link conditions include forward error rates. However, Kao teaches in an analogous art, that The communication system of claim 38 wherein said radio link conditions include forward error rates. (Col.7; 15-25) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include radio link conditions include forward error rates in order to provide an improved wireless communication system which overcome the limitations of conventional cellular system.

Claims 4-5, 15-24, 41, & 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over McLaughlin et al. in view of Howard et al.

4. Regarding claim 4, McLaughlin disclosed all the particulars of the claim except change time is approximately an up-link signal frame rate of said up-link signals. However, Howard teaches in an analogous art, that The communication system of claim 3 wherein said change time is approximately an up-link signal frame rate of said up-link signals. (Col.14; 64 – Col.15; 8) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include change time is approximately an up-link signal frame rate of said up-link signals in order to provide perfect isolation to increase frequency reuse and thereby increase system capacity.

5. Regarding claim 5, McLaughlin disclosed all the particulars of the claim except change time is a multiple of said up-link signal frame rate. However, Howard teaches in an analogous art, that The communication system of claim 4 wherein said change time is a multiple of said up-link signal frame rate. (Col.14; 64 – Col.15; 8) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to radio link conditions include change time is a multiple of said up-link signal frame rate in order to provide perfect isolation to increase frequency reuse and thereby increase system capacity.

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15. Regarding claim 15, McLaughlin disclosed The communication system of claim 13 wherein, said transceiver stations include a plurality of macro-diverse broadcasters distributed at macro-diverse broadcaster locations for broadcasting said down-link signals and include a plurality of macro-diverse collector means distributed at macro-diverse collector locations for receiving said up-link signals and providing received signals for said particular mobile station, (Col.9; 29-56) said

measurement means includes a plurality of measurement units, (Col.10; 63 - Col.11; 3) one for each of said zone managers (20; Fig.1), where each measurement unit measures up-link signals from said particular mobile station to form unit measurements representing the quality of said received signals at one of said macrodiverse collector locations, (Col.11; 4-15) said

(McLaughlin fails to disclosed determining preferred ones of said broadcasters and preferred ones of said collectors for said particular dedicated channels for said particular mobile station. However, Howard teaches in an analogous art, that processor means for a host zone manager receives a plurality of said unit measurements and operates for processing said unit measurements to provide host processor information for determining preferred ones of said broadcasters and preferred ones of said collectors for said particular dedicated channels for said particular mobile station, (Col.13; 1-17) said

control means dynamically selects said particular dedicated channels for said particular mobile station by selecting said preferred ones of said broadcasters to provide particular down-link signals and dynamically selects said preferred ones of said collectors to receive particular up-link signals for said particular mobile station. (Col.13; 1-17) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include determining

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preferred ones of said broadcasters and preferred ones of said collectors for said particular dedicated channels for said particular mobile station in order to provide a particular broadcaster for separate transmission.)

16. Regarding claim 16, McLaughlin disclosed The communication system of claim 15 wherein, said control means for said host zone manager is responsive to said host processor information for changing said dedicated channels. (Col.12; 34-59)

17. Regarding claim 17, McLaughlin disclosed The communication system of claim 15 wherein, said control means for said host zone manager is responsive to said host processor information for changing said dedicated channels as frequently as a signal change time determined by a frequency of said up-link signals. (Col.12; 34-59)

19. Regarding claim 19, McLaughlin disclosed The communication system of claim 15 wherein said up-link signals from said particular mobile station are measurement signals occurring at a measurement signal rate of  $1/T$ , wherein said measurement unit in each zone manager operates to generate said unit measurements at a rate of  $1/T$ , wherein said processor means in each zone manager operates, respectively, to generate integrated unit measurement reports by integrating a plurality of said unit measurements, respectively, over an integration length. (Col.12; 34-67)

20. Regarding claim 20, McLaughlin disclosed The communication system of claim 19 wherein, said processor means for said host zone manager receives and compares said zone integrated unit

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measurement reports from a plurality of said zone managers to form host processor information for said host zone manager. (Col.12; 34-59)

21. Regarding claim 21, McLaughlin disclosed The communication system of claim 20 wherein, said control means for said host zone manager is responsive to said host processor information for changing said down-link signals to and said up-link signals from said particular mobile station. (Col.9; 29-56)

22. Regarding claim 22, McLaughlin disclosed The communication system of claim 20 wherein, control means for said host zone manager has the capacity for making changes as frequently as a signal change time determined by a frequency of said up-link signals. (Col.12; 34-59)

23. Regarding claim 23, McLaughlin disclosed all the particulars of the claim except as function of comparison of k successive measurement reports. However, Howard teaches in an analogous art, that The communication system of claim 20 wherein said host processor information is generated as function of comparison of k successive measurement reports. (Col.36; 9-23)

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include as function of comparison of k successive measurement reports in order to provide an aggregator for receiving continuous channels.

24. Regarding claim 24, McLaughlin disclosed all the particulars of the claim except  $k=2$ . However, Howard teaches in an analogous art, that The communication system of claim 23

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wherein  $k=2$ . (Col.36; 9-23) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include  $k=2$  in order to provide an aggregator for receiving a particular channel.

41. Regarding claim 41, McLaughlin disclosed all the particulars of the claim except radio link conditions include carrier to interference ratio. However, Howard teaches in an analogous art, that The communication system of claim 38 wherein said radio link conditions include carrier to interference ratio. (Col.35; 35-47) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to radio link conditions include carrier to interference ratio in order to provide perfect isolation to increase frequency reuse and thereby increase system capacity.

47. Regarding claim 47, McLaughlin disclosed all the particulars of the claim except transmit power level. However, Howard teaches in an analogous art, that The communication system of claim 44 wherein said processor information includes transmit power level. (Col.14; 64 – Col.15; 8) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to radio link conditions include transmit power level in order to provide perfect isolation to increase frequency reuse and thereby increase system capacity.

48. Regarding claim 48, McLaughlin disclosed all the particulars of the claim except locations of mobile stations. However, Howard teaches in an analogous art, that The communication system of claim 44 wherein said processor information includes locations of mobile stations.

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(Col.14; 64 – Col.15; 8) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to radio link conditions include locations of mobile stations in order to provide perfect isolation to increase frequency reuse and thereby increase system capacity.

Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over McLaughlin et al. in view of Ueno et al.

45. Regarding claim 45, McLaughlin disclosed all the particulars of the claim except priority levels for the communication links with mobiles. However, Ueno teaches in an analogous art, that The communication system of claim 44 wherein said processor information includes priority levels for the communication links with mobiles. (Col.16; 31–39) Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to include priority levels for the communication links with mobiles in order to provide meta-signaling procedure based on performance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is 703-308-4736. The examiner can normally be reached on Mon-Thu. (6:30-4:00) alternate Fri.( 6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Sharad k. Rampuria  
June 16, 2003



WILLIAM TROST  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600